TRIODE-HEPTODE

Triode-heptode intended for use as pulse separator, noise inverter and sync. amplifier.

QUICK REFERENCE DATA			
Triode section			
Anode voltage	V_a	50	V
Anode current	I_a	3	mA
Transconductance	S	3.7	mA/V
Amplification factor	μ	50	-
Heptode section			
Anode voltage	V_a	135	V
Grids No.2 and 4 voltage	V_{g2+4}	14	V
Anode current	I_a	1.7	mA
Grids No.2 and 4 current	I_{g2+4}	0.9	mA
Transconductance	S	2.2	mA/V

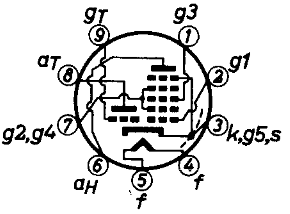
HEATING: Indirect by A.C. or D.C.; series or parallel supply

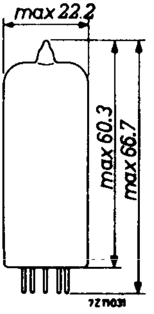
Heater voltage	V_f	6.3	V
Heater current	I_f	300	mA

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval





CAPACITANCES

Triode section

Grid to all except anode	$C_{g(a)}$	3.0	pF
Anode to grid	C_{ag}	1.1	pF

Heptode section

Anode to grid No.1	C_{ag_1}	max. 0.009	pF

Between triode and heptode sections

Grid triode to grid No.1 heptode	$C_{g_T g_{1H}}$	max. 0.10	pF
Anode triode to grid No.1 heptode	$C_{a_T g_{1H}}$	max. 0.08	pF
Anode triode to grid No.3 heptode	$C_{a_T g_{3H}}$	max. 0.13	pF
Grid triode to anode heptode	$C_{g_T a_H}$	max. 0.09	pF
Anode triode to anode heptode	$C_{a_T a_H}$	max. 0.25	pF

TYPICAL CHARACTERISTICS

Triode section

Anode voltage	V_a	50	V
Grid voltage	V_g	0	V
Anode current	I_a	3	mA
Transconductance	S	3.7	mA/V
Amplification factor	μ	50	-
Anode voltage	V_a	200	V
Grid voltage	V_g	-11	V
Anode current	I_a	max. 0.1	mA

TYPICAL CHARACTERISTICS (continued)

Heptode section

Anode voltage	V_a	135	V
Grid No.3 voltage	V_{g3}	0	V
Grids No.2 and 4 voltage	V_{g2+4}	14	V
Grid No.1 voltage	V_{g1}	0	V
Anode current	I_a	1.7	mA
Grids No.2 and 4 current	I_{g2+4}	0.9	mA
Transconductance	S	2.2	mA/V
Grid No.3 voltage	V_{g3}	-2	V
Grid No.1 voltage	V_{g1}	0	V
Anode current	I_a	20	µA
Grid No.1 voltage	V_{g1}	-1.9	V
Grid No.3 voltage	V_{g3}	0	V
Anode current	I_a	20	µA

LIMITING VALUES (Design centre rating system)

Heptode section

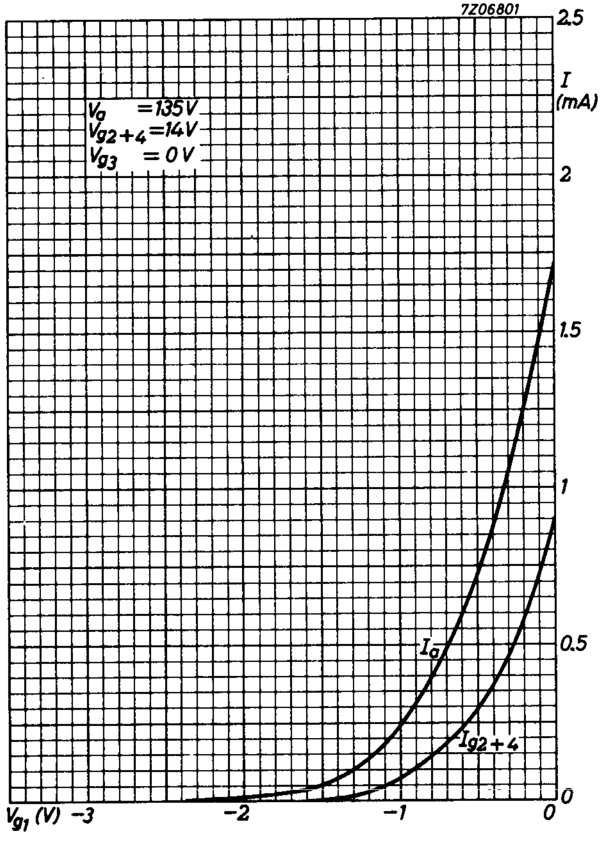
Anode voltage	V_{a_o}	max.	550	V
	V_a	max.	250	V
Anode dissipation	W_a	max.	1.7	W
Grids No.2 + 4 voltage	V_{g2+4_o}	max.	550	V
	V_{g2+4}	max.	250	V
		min.	10	V [1])
Grids No.2 + 4 dissipation	W_{g2+4}	max.	0.8	W
Grid No.3 voltage, negative peak	$-V_{g3p}$	max.	150	V
Grid No.3 resistor	R_{g3}	max.	3	MΩ
Grid No.1 voltage, negative peak	$-V_{g1p}$	max.	150	V
Grid No.1 resistor	R_{g1}	max.	3	MΩ
Cathode current	I_k	max.	12.5	mA
Cathode to heater voltage	V_{kf}	max.	100	V

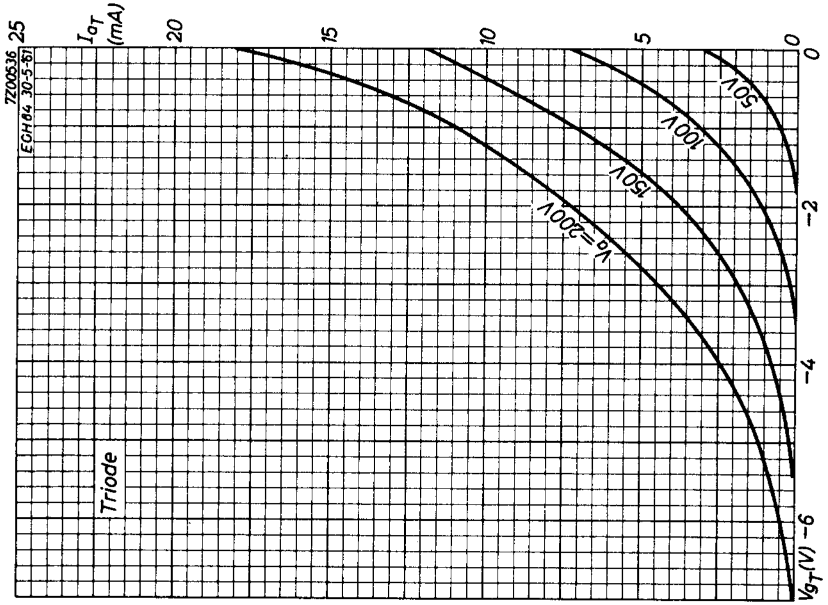
[1]) This value applies to an average tube operated under the worst probable conditions.

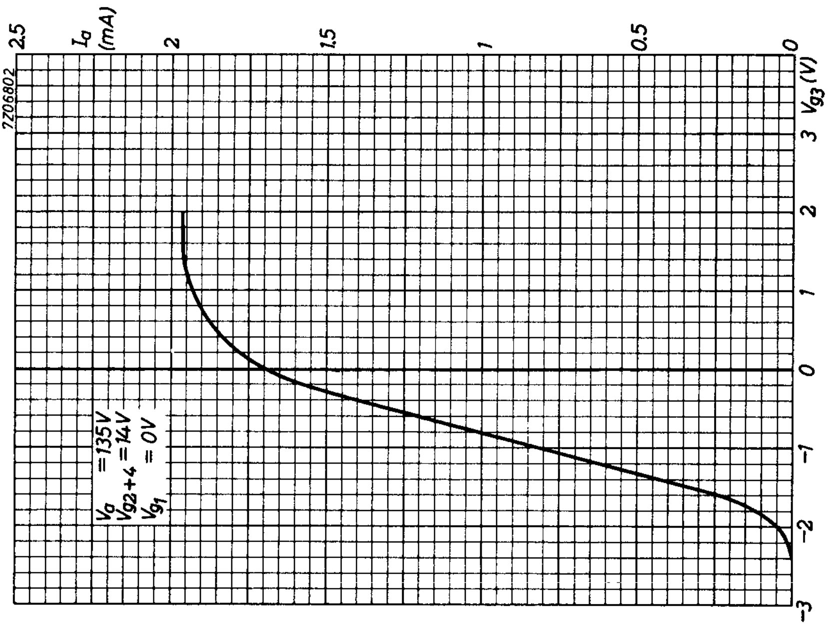
LIMITING VALUES (continued)

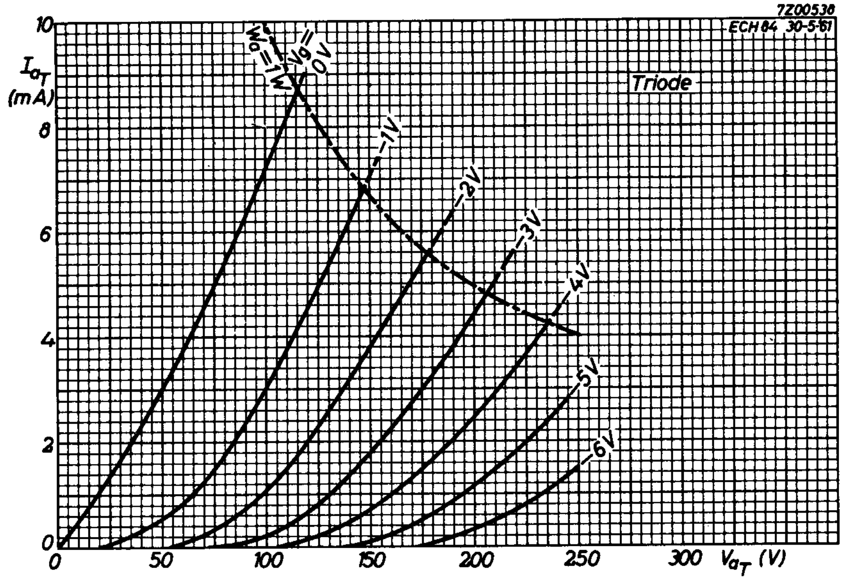
Triode section

Anode voltage	V_{a_o}	max.	550	V
	V_a	max.	250	V
Anode dissipation	W_a	max.	1.3	W
Grid voltage, negative peak	$-V_{g_p}$	max.	200	V
Grid resistor	R_g	max.	3	MΩ
Cathode current	I_k	max.	10	mA
Cathode to heater voltage	V_{kf}	max.	100	V




7Z00536
ECH84 30-5-61
I_{a_T} (mA)
25
20
15
10
5
0
Triode
V_a=200V
150V
100V
50V
0
−2
−4
−6
V_{g_T}(V)


7Z06802
I_a (mA)
2.5
2
1.5
1
0.5
0
V_a = 135V
V_{g2+4} = 14V
V_{g1} = 0V
V_{g3} (V)
3
2
1
0
−1
−2
−3



7Z00538
ECH84 30-5-61
Triode
I_{a_T} (mA)
V_{a_T} (V)
Wa=1W
Vg=0V
-1V
-2V
-3V
-4V
-5V
-6V
0
2
4
6
8
10
0
50
100
150
200
250
300

PHILIPS

Data handbook

Electronic components and materials

ECH84

page	sheet	date
1	1	1970.01
2	2	1970.01
3	3	1970.01
4	4	1970.01
5	5	1970.01
6	6	1970.01
7	FP	1999.08.10